What is claimed is:

1. A print system comprising:

a terminal that generates image data;

at least one printer that performs print operations for forming an image on a recording medium using an ink based on print data; and

a printer controller that is connected between the terminal and the printer and converts the image data into the print data,

wherein the printer controller comprises:

predicting means for predicting a required ink amount indicating an amount of ink required for the printer to perform the print operations based on the print data;

a memory that stores required ink amount data indicating the required ink amount; and

transmitting means for transmitting a request signal to the printer, the request signal requesting the printer to transmit remaining ink amount data indicating a remaining ink amount which indicates an amount of ink remaining in the printer;

the printer comprises:

managing means for managing the remaining ink amount data; and

transmitting means for transmitting the ink amount data in response to the request signal; and

at least one of the terminal and the printer controller comprises:

receiving means for receiving the remaining ink amount data from the transmitting means of the printer;

retrieving means for retrieving the required ink amount data stored in the memory;

determination means for determining based on the remaining ink amount data and the required ink amount data, whether or not the remaining ink amount is sufficient to perform the print operations, before the print operations are started; and

notifying means for notifying a user of a determination result determined by the determination means.

2. The print system according to claim 1, wherein the determination means further determines how much ink is short when the remaining ink amount is determined to be not sufficient, and the notifying means notifies the user of how much ink is short.

3. The print system according to claim 1, wherein the transmitting means of the printer controller repeatedly transmits the request signal at a predetermined interval.

4. The print system according to claim 1, wherein the printer controller further comprises preview data generating means for generating preview data based on the image data, the preview data being generated by reducing a size of the

image data, and the predicting means predicts the required ink amount based on the preview data.

5. The print system according to claim 4, wherein the predicting means comprises:

average tone calculation means for calculating an average tone of pixels making up a preview image, the preview image being formed based on the preview data;

average density calculation means for calculating an average density of the image to be formed based on the average tone; and

ink amount calculation means for calculating, as the required ink amount, an ink amount for forming the image with the average density at an actual size.

6. The print system according to claim 1, wherein at least one of the terminal and the printer controller further comprises an another memory that stores the remaining ink amount data, and another determination means for determining whether or not ink needs to be replenished to the printer based on the remaining ink amount data stored in the memory; and the notifying means further notifies the user that the ink needs to be replenished when the another determination means determines that the ink needs to be replenished.

7. The print system according to claim 6, wherein the notifying means comprises a display that notifies the user of the remaining ink amount by displaying at least one of a

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normal sized graph and a magnified sized graph, the display displaying the magnified sized graph when instructed by a user or when the another determination means determines that the ink needs to be replenished.

5   8. The print system according to claim 6, further comprising a plurality of printers,

wherein the memory stores the remaining ink amount data received from the transmitting means of each of the plurality of printers;

10   at least one of the terminal and the printer controller further comprises data editing means for editing the remaining ink amount data received from the transmitting means of each of the plurality of printers into single data; and

15   the notifying means notifies the user of the remaining ink amount of each of the plurality of printers in a form that enables the user to compare the remaining ink amount of each of the plurality of printers.

9. The print system according to claim 8, wherein the
20   printer controller further includes condition detecting means for detecting a condition of the printers;

the managing means further manages condition data indicating the condition of the printers;

the notifying means notifies the user of the remaining
25   ink amount and the condition of the printers based on the

remaining ink amount data and the condition data in a form that enables the user to compare the remaining ink amount and the condition of the plurality of printers.

10. The print system according to claim 9, wherein the printer controller further comprises printer selecting means for selecting, based on at least one of the remaining ink amount data and the condition data, one of the plurality of printers which performs the print operations.

11. The print system according to claim 1, wherein

the printer performs the print operations using a plurality of different colors of ink;

the predicting means predicts the required ink amount for each of the different colors;

the managing means manages the remaining ink amount data indicating the remaining ink amount for each of the different colors; and

the determination means determines whether or not the remaining ink amount is sufficient for each of the different colors.

12. The print system according to claim 11, wherein the notifying means comprises a display that displays graphs, and the notifying means further notifies the user of the remaining ink amount and required ink amount of each of different colors by displaying the graphs each indicating the remaining ink amount and required ink amount of

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corresponding one of the different colors.

13.   A printer controller connected between a terminal and a printer, the terminal generating image data, the printer performing print operations for forming an image on a recording medium based on print data, the printer transmitting remaining ink amount data indicating an amount of ink remaining in the printer in response to a request signal from external devices, the printer controller comprising:

converting means for converting the image data into the print data;

predicting means for predicting, based on the image data, a required ink amount indicating an ink amount required by the printer for performing the print operations based on the print data;

transmitting means for transmitting the request signal to the printer;

receiving means for receiving the remaining ink amount data from the printer;

determination means for determining, before the print operations start, whether the remaining ink amount is sufficient for the printer to perform the print operations; and

notifying means for notifying a user of determination results determined by the determination means.

14. A printer controller connected between a terminal and a printer, the terminal generating image data, the printer performing print operations for forming an image on a recording medium based on print data, the printer transmitting remaining ink amount data indicating an amount of ink remaining in the printer in response to a request signal from external devices, the printer controller comprising:

converting means for converting the image data into the print data;

predicting means for predicting, based on the image data, a required ink amount indicating an ink amount required by the printer for performing the print operations based on the print data;

first transmitting means for transmitting the request signal to the printer;

receiving means for receiving the remaining ink amount data from the printer;

determination means for determining, before the print operations start, whether the remaining ink amount is sufficient for the printer to perform the print operations; and

second transmitting means for transmitting required ink amount data indicating the required ink amount and the remaining ink amount data to the terminal.

15. A predicting method for predicting a required ink amount required by a printer for performing print operations, the predicting method comprising the steps of:

generating preview data based on image data;

determining an average tone of pixels of a preview image, the preview image being formed based on the preview data data;

based on the average tone, calculating an average density of a print image to be printed; and

detecting an ink amount required for printing an entire print region with the average density at an actual size.

16. A notifying method of notifying a user of an ink amount, the notifying method comprising the steps of:

(a) converting image data into print data;

(b) predicting a required ink amount indicating an ink amount required by a printer for performing print operations, the print operations being performed for forming a print image on recording medium based on the print data;

(c) detecting a remaining ink amount indicating an ink amount remaining in the printer;

(d) comparing the required ink amount with the remaining ink amount;

(e) determining whether or not the remaining ink amount is sufficient for the printer to perform the print

operations; and

(f) notifying a user of a determination result of the step (e).

17. The notifying method according to claim 16, further comprising the steps of (g) determining how much ink is short when it is determined in the step (e) that the remaining ink amount is not sufficient, and (h) notifying the user of how much ink is short.

18. The notifying method according to claim 16, wherein the step (d) comprises the steps of (i) generating preview data based on the image data, and (j) predicting the required ink amount based on the preview data.

19. The notifying method according to claim 18, wherein the step (j) comprises the steps of (k) displaying a preview image based on the preview data, (l) calculating an average tone of pixels of the preview image, (m) based on the average tone, calculating an average density of the print image printed by the print operations, and (n) calculating, as the required ink amount, an ink amount required for printing an entire print region with the average density at an actual print size.

20. The notifying method according to claim 16, further comprising the steps of:

(o) determining whether or not ink needs to be replenished; and

(p) notifying a user that the ink needs to be replenished when it is determined in the step (o) that ink needs to be replenished.

21. The notifying method according to claim 16, wherein the step (c) comprises the steps of (q) storing initial ink amount data indicating an amount of ink remaining in the printer immediately after ink has replenished last time; (r) based on a cumulative amount of print data, detecting consumed ink amount indicating an amount of ink consumed since the ink has replenished last time; and (s) subtracting the consumed ink amount from the initial ink amount, thereby obtaining the remaining ink amount.

22. The notifying method according to claim 16, further comprising the steps of:

(t) detecting a condition of the printers; and

(u) notifying the user of the condition of the printers.

23. The notifying method according to claim 22, further comprising the steps of (v) based on the remaining ink amount and the condition of the print operations, automatically selecting one of a plurality of printers to which the print data is transmitted.